

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>NEUR-122615</b>	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. <b>PCT/IB2004/001023</b>	International filing date (day/month/year) <b>02/04/2004</b>	(Earliest) Priority Date (day/month/year) <b>02/04/2003</b>
Applicant  <b>NEUROSTREAM TECHNOLOGIES INC.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (See Box II).

3. ☐ Unity of invention is lacking (see Box III).

## 4. With regard to the title,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

**IMPLANTABLE NERVE SIGNAL SENSING AND STIMULATION DEVICE FOR TREATING FOOT DROP AND OTHER NEUROLOGICAL DISORDERS**

## 5. With regard to the abstract,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

## 6. With regards to the drawings,

- a. the figure of the drawings to be published with the abstract is Figure No. 4

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

- b. ☐ none of the figures is to be published with the abstract.

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB2004/001023

Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)

A fully implantable nerve stimulation system includes an event-triggered, closed loop control unit (50) that detects physiological events, e.g. occurrence of heel contact or toe lift event, from nerve signals through one or more nerve cuff electrodes and delivers stimulation pulses to a nerve to produce a desired physiological response. The stimulation system includes a low-noise, low-power nerve signal amplifier (180), accelerometers (156) that detect the orientation angle of a patient's thigh and a battery powered processor (150) that selectively powers components in the system to detect said physiological events and deliver said stimulation pulses with a minimum of battery power.

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International Application No  
PCT/IB2004/001023

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61N1/08 A61N1/36 A61N1/05 A61N1/378 A61B5/11

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61N A61B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BIOSIS, MEDLINE

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CA 2 097 857 A (HOFFER ANDY ;HAUGLAND MORTEN (DK); SINKJAER THOMAS (DK)) 5 December 1994 (1994-12-05)	1-4, 8, 9, 16-19, 22, 25, 33, 34
Y		6, 7, 10-15, 20, 21, 24, 25, 30-34
A	page 1, line 2 -page 13, line 9 page 19, line 23-33 page 31, line 2 -page 33, line 26; figures 1-5  ---  -/--	37

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*G\* document member of the same patent family

Date of the actual completion of the international search

31 August 2004

Date of mailing of the international search report

08/09/2004

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## INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB2004/001023

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01/60445 A (NEURODAN AS ;HAUGLAND MORTEN (DK); SINKJAER THOMAS (DK)) 23 August 2001 (2001-08-23)	1-4,8,9, 16-19, 22,25, 27,28, 31-34,37
Y	page 28, line 10 -page 39, line 11; figures 1-5	1,6,7, 10-15, 20,21, 24,25, 30-34,37
Y	WO 02/13695 A (BARRISKILL ANDREW ;DUNCAN MICHAEL ROBERT (AU); NEOPRAXIS PTY LTD ()) 21 February 2002 (2002-02-21)	6,7, 10-15, 20,21, 24,25, 30-34
Y	page 3, line 19 -page 5, line 35 page 8, line 13 -page 9, line 18 page 12, line 14 -page 17, line 25; figures 1-5	
Y	US 2002/188331 A1 (DEMCHAK JEFFREY A ET AL) 12 December 2002 (2002-12-12)	37
A	p. 2, '0034! - p. 4, '0058! p. 10, '0102! - p. 11, '0110! figures 1-7,12	1,8,9, 19,25
Y	US 6 415 181 B1 (GREENINGER DANIEL R ET AL) 2 July 2002 (2002-07-02) column 1, line 24 -column 3, line 43	1
A	US 4 750 499 A (HOFFER JOAQUIN A) 14 June 1988 (1988-06-14) abstract; figures 1-5	1-37
A	US 5 038 781 A (LYNCH H WILFRED) 13 August 1991 (1991-08-13) abstract; figures 1,2,12,17-19	1-37

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IB2004/001023

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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